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EXAMINER	
YANG, CLARA I	
ART UNIT	PAPER NUMBER
2635	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/840,827	Applicant(s) CHRISTENSEN ET AL.	
	Examiner Clara Yang	Art Unit 2635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11 and 13-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11 and 13-19* is/are rejected.

7)☒ Claim(s) *11 and 14* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 April 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1 - 11 and 13 - 19 have been considered but are moot in view of the new ground(s) of rejection.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the components of a device (i.e., a receiver, a transmitter, a first memory, a processor, and input/output means) and the first and second controllers must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Allowable Subject Matter

3. Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Objections

4. Claim 11 is objected to because of the following informalities: Change "controller identifiers" to "controller identifier". Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. Claim 11 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter that was not described in

the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 11 calls for the processor of the first and second controllers being able to assign a "controller identifier" to a controller upon introduction of the controller in the system. However, on page 13, lines 34 - 36 of the substitute specification, the Applicant teaches that each controller has "a pre-set unique identifier which is written in a memory of each controller during production and which cannot be altered." In other words, the controller identifier is assigned at the factory, not by another controller. Because the Applicant teaches assigning a system identifier to a controller on page 14, lines 12 - 17, the Examiner interprets Claim 11 to require "means for assigning a system identifier to a controller upon introduction of the controller to the system."

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1, 8, 10, 15 - 17and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,297,746 (Nakazawa et al.) in view of U.S. Patent No. 6,107,937 (Hamada).

Referring to Claims 1, 15, and 19, Nakazawa's centralized apparatus control system for controlling a plurality of electrical appliances, as shown in Fig. 1, comprises a plurality of terminal units 200 and host unit 100 or first controller. Per Nakazawa, a plurality of host units 100 can be provided (see Col. 23, lines 48 – 51). Each terminal unit 200, as shown in Fig. 4, has: (a) radio frequency (RF) transmitter and receiver 32 for radio communication with host unit 100 (see Col. 10, lines 43 – 46); (b) a first EEPROM for holding an identification (ID) code (see Col. 12, lines 66 – 67); (c) microcomputer 30 for controlling the entire operation of terminal unit 200 (see Col. 10, lines 46 – 51); and (d) terminal 50 for providing an output to or receiving an input from an appliance connected to terminal unit 200 (see Col. 10, lines 54 – 67 and Col. 11, lines 1 – 31). Nakazawa's first and second host units 100, as shown in Fig. 2, comprise: (a) RF transmitter and receiver 20 (see Col. 10, lines 26 – 29); (b) EEPROM 18 for holding the ID code and function content of each terminal unit 200 (see Col. 10, lines 32 – 35 and Col. 23, lines 22 - 28); and (c) microcomputer 12 for controlling RF transmitter and receiver 20 and the other components, for receiving and storing ID codes of terminal units 200, and generating control signals addressed to each terminal unit 100 (see Col. 10, lines 35 – 40; Col. 14, lines 49 – 59; and Col. 23, lines 9 – 28). When more than one host unit 100 is provided, Nakazawa discloses that after all terminal units 200 have been registered in the first host unit 100, the ID codes and function codes for each appliance is copied to another host unit 100 by RF communication in order to avoid a redundant registration process (see Col. 23, lines 9 – 28 and 63 – 67). Here it is understood that

the process of controlling appliances is a first mode of operation and that the transmission of the registered data from the first host unit 100 to the second host unit 100 is a second mode of operation. Because host units 100 are identical, it is also understood that EEPROM 18 of each host unit 100 has identical data structure. Nakazawa's first and second host units 100, however, each lacks a second memory for storing its ID code.

In an analogous art, Hamada teaches a remote control system, as shown in Fig. 1, comprising a plurality of electrical appliances 104, 105, and 106 and remote control units 101, 102, and 103. Each of Hamada's appliances, as shown in Fig. 2, comprises: (a) signal receiving unit 202; (b) signal transmitting unit 208; (c) memory unit 203; (d) microcomputer 207; and (e) command interpretation unit 205 for providing output to operation unit 206 (i.e., the appliance). (See Col. 3, lines 1 - 18.) Each of Hamada's remote control units, as shown in Fig. 3, comprises: (a) signal receiving unit 406; (b) signal transmitting unit 404; (c) memory 403 for storing its ID code and command codes; and (d) central processing unit (CPU) 402. (See Col. 3, lines 19 - 36 and 53 - 63.) Per Hamada, when remote control unit 101, 102, and 103 transmit a control signal to appliances 104, 105, and 106, CPU 402 of the remote control unit adds the stored ID code to the control signal prior to transmission (see Col. 3, lines 61 - 63).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the first and second host units 100 of Nakazawa as taught by Hamada because each host unit 100 having a unique ID code stored in a second memory enables terminals 200 to communicate only to a desired host unit 100 and eliminates unnecessary data reception and processing at other host units 100.

Regarding Claim 8, as mentioned above in Claim 1, Nakazawa discloses that after all terminal units 200 have been registered in the first host unit 100, the ID codes and function

codes for each appliance is copied to another host unit 100 by RF communication in order to avoid a redundant registration process (see Col. 23, lines 9 - 28 and 63 - 67). Though Nakazawa omits expressly stating that the signals from the first host unit 100 includes a frame instructing microcomputer 12 of second host unit 100 where to store the device addresses in EEPROM 18, the Examiner takes Official Notice that the method of instructing the processor of a device as to where to store data is well known. Consequently, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nakazawa's host units 100 since the method of instructing the processor of a device as to where to store data is well known and ensures that the organized data structures of the first and second host units 100 have the same content in the same locations, thereby facilitating data updates and enabling both host units 100 to perform substantially the same functions.

Regarding Claims 10 and 17, as explained above in Claims 1 and 15, Nakazawa discloses that the ID codes and function codes for each appliance stored in a first host unit 100 is copied to a second host unit 100 via RF communication. Nakazawa, though, is silent on microcomputer 12 of the second host unit 100 overwriting existing data in EEPROM 18 with new data received from the first host unit 100. However, the Examiner takes Official Notice that processors with the ability to replace or overwrite existing data with corresponding new data are well known. Consequently, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nakazawa's microcomputer 12 of the second host unit 100 such that it is able to overwrite all information in EEPROM 18 relating to the updated data received from the first host unit 100 since processors with the ability to replace or overwrite existing data with new data are well known and allow only outdated data to be modified, thereby improving efficiency and decreasing processing time.

Regarding Claim 16, Nakazawa discloses that after all terminal units 200 have been registered in the first host unit 100, the ID codes and function codes for each appliance is copied to another host unit 100 by RF communication in order to avoid a redundant registration process (see Col. 23, lines 9 - 28 and 63 - 67). The transmission of the registered data from the first host unit 100 to the second host unit 100 is understood to be a second mode of operation. As shown in Fig. 3, host unit 100 has an operation setting button 16*a* for selecting host unit 100's mode of operation (see Col. 10, lines 16 - 19 and Col. 15, lines 12 - 22). Here it is understood that button 16*a* is selected in order to place the second host unit 100 into the second mode of operation.

9. Claims 2, 11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,297,746 (Nakazawa et al.) and U.S. Patent No. 6,107,937 (Hamada) as applied to claim 1 above, and further in view of U.S. Patent No. 5,905,442 (Mosebrook et al.).

Regarding Claims 2, 11, and 13, Nakazawa and Hamada are silent on (1) the first and second host units 100 storing a unique system identifier in the second memory, (2) the first and second host units 100 having means for assigning system identifiers to another host unit 100, and (3) the first and second host units 100 having the means for assigning device identifiers to a terminal unit 200.

In an analogous art, Mosebrook teaches a control system, as shown in Fig. 9, comprising a plurality of lighting control device 50, a master control device 20, and a master control device 30 (see Col. 11, lines 29 - 33, 39 - 42, and 65 - 67; and Col. 16, lines 46 - 63). Each dimmer 50 comprises (a) an RF transmitter, (b) an RF receiver, (c) a memory for storing a house code or system identifier and an assigned address, (d) control board 506 having a microprocessor control circuit, and (e) means for providing output to a connected lamp 54 (see Col. 11, lines 65

- 67; Col. 12, lines 1 - 6, 45 - 49, and 55 - 60; Col. 20, lines 53 - 54 and 63 - 67; and Col. 21, lines 1 - 5 ad 17 - 20). Master control device 20 and 30 both have (a) an RF transmitter, (b) an RF receiver, (c) a memory for storing a house code or system identifier and an assigned address, and (d) control board 306 having a microprocessor control circuit (see Col. 14, lines 20 - 24; Col. 19, lines 56 - 58; Col. 20, lines 53 - 54; and Col. 21, lines 13 - 14 and 20 - 27). Per Mosebrook, when a repeater is used in the system, the main repeater assigns house codes and addresses to master control devices and lighting control devices 50 in a sequential manner (see Col. 19, lines 56 - 58; Col. 20, lines 53 - 54 and 63 - 65; and Col. 21, lines 17 - 20). For example, the first light control device 50 selected by a user for addressing is assigned the address "D1". The second light control device 50 is assigned "D2" and so forth. Mosebrook also teaches that the master control devices are able to assign house codes and addresses to lighting control devices 50 when repeaters are unnecessary (see Col. 17, lines 56 - 63).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the host units 100 and terminal units 200 of Nakazawa and Hamada as taught by Mosebrook because the use of a unique house code or system identifier prevents interference with nearby system (see Mosebrook, Col. 17, lines 35 - 45) and the ability to assign device identifiers to terminal units 200 via host units 100 provides a user with enhanced control over the system and its organization.

10. Claims 3 - 6, 9, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,297,746 (Nakazawa et al.) and U.S. Patent No. 6,107,937 (Hamada) as applied to claims 1 and 15 above, and further in view of U.S. Patent No. 6,104,334 (Allport).

Regarding Claims 3 - 6, Nakazawa discloses that after all terminal units 200 have been registered in the first host unit 100, the ID codes and function codes for each appliance is copied

to another host unit 100 by RF communication in order to avoid a redundant registration process (see Col. 23, lines 9 - 28 and 63 - 67). Nakazawa and Hamada, however, fail to teach the following: (1) EEPROM 18 of first host unit 100 holding alphanumerical data in relation to each ID code of terminal unit 200 as well as in relation to groups of ID codes; (2) microcomputer 12 of the first host unit 100 generating one or more signals comprising the alphanumeric data; (3) microcomputer 12 of the second host unit 100 storing the alphanumeric data received from the first host unit 100; (3) the alphanumeric data comprising predetermined settings characterizing the operation of one or more corresponding terminal units 200; (4) the alphanumeric data comprising predetermined settings characterizing the operation of one or more corresponding appliances connected to terminal units 200; and (5) the alphanumeric data comprising predetermined routines related to the dynamical operation of one or more terminal units 200 over a period of time.

In an analogous art, Allport teaches a remote control to control various consumer appliances made by various manufacturers (see Abstract). Referring to Fig. 18, which is a high-level schematic of the hardware used in Allport's remote control 10, remote control 10 comprises: (a) hardware for RF communication (see Col. 27, lines 49 - 51); (b) flash ROM 625 for storing command libraries (see Col. 27, lines 25 - 26 and Col. 28, lines 31 - 36); (c) working memories DRAM 615 and SRAM 62 (see Col. 28, lines 31 - 36); and (c) central processing unit (CPU) 605 and IO-ASIC 630 for controlling data transmission and reception (see Col. 27, lines 9 - 10 and 33 - 61). Here it is understood that remote control 10's current settings include the list of identifiers for each device to be controlled, the device type, the table of commands for each device, and the associated data such as the representation of the commands on remote control 10's display (see Col. 8, lines 6 - 12). As indicated in Fig. 3, Allport teaches grouping controlled

devices into three groups: pictures (e.g., DVD, satellite box, TV, VCR, etc.), music (e.g., phonograph, tape player, CD player, radio, etc.), and other (e.g., kitchen appliances, security system, a baby monitor, etc.) (see Col. 9, lines 21 - 24 and 58 - 65). Here it is understood that "pictures", "music", and "other" are alphanumeric data relating to groups of controlled appliances. As shown in Fig. 8, which depicts a typical "music" screen 25, Allport's remote control 10 comprises predetermined settings characterizing the operation of a device and its connected appliance (see Col. 16, lines 20 - 21 and 41 - 59). Allport's remote control 10 also includes predetermined routines related to the dynamical operation of one or more appliances over a period of time. For example, in Col. 15, lines 27 - 41, Allport discloses using remote control 10 to program a VCR. And when controlling a multiple-disc CD player, Allport's remote control 10 is able to determine when to send a command to load the next CD while playing a current CD (see Col. 19, lines 32 - 67 and Col. 20, lines 1 - 17). Allport's remote control 10 also has an "update system" with an option to allow remote control 10's current settings to be saved onto another remote control 10 (see Col. 23, lines 14 - 18).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify host units 100 of Nakazawa and Hamada as taught by Allport because grouping the appliances based on the types of appliances, providing predetermined settings that characterize the operation of terminal units 200 and their connected appliances, and providing predetermine routines related to the dynamical operation of one of more appliances over a period of time present information to the user in a manner related to how the user thinks and reduce manual manipulation of host units 100 by the user, thereby making the controllers more user-friendly (see Allport, Col. 9, lines 21 - 34).

Regarding Claims 9 and 18, Nakazawa and Hamada are silent on microprocessor 12 of the first or second host unit 100 having the ability to erase all the existing ID codes stored in EEPROM 18 of the second host unit 100 prior to second host unit 100 storing the new ID codes.

Allport's remote control 10 provides a user the option to delete an old device from the device known to remote control 10 (see Col. 22, lines 19 - 21). Here it is understood that a user is able to cause remote control 10's CPU 605 delete information of all known devices by using this option.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nakazawa and Hamada's second host unit 100 as taught by Allport because the process of deleting all device identifiers in the second host unit 100 prior to receiving device identifiers from the first host unit 100 results ensures that the data stored in the second host unit 100's EEPROM 18 is identical to the data stored in the first host unit 100's EEPROM 18.

11. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,297,746 (Nakazawa et al.) and U.S. Patent No. 6,107,937 (Hamada) as applied to claim 1 above, and further in view of U.S. Patent No. 6,275,166 (del Castillo et al.).

Regarding Claim 7, as explained above in Claim 1, Nakazawa discloses that after all terminal units 200 have been registered in the first host unit 100, the ID codes and function codes for each appliance is copied to another host unit 100 by RF communication in order to avoid a redundant registration process (see Col. 23, lines 9 - 28 and 63 - 67). Nakazawa and Hamada, though, are silent on EEPROM 18 of host unit 100 also having a routing table.

In an analogous art, del Castillo teaches, as shown in Fig. 2, an RF remote appliance control/monitoring system comprising: (a) a distributed array of appliance management

stations (AMSs) 12 or devices, wherein each AMS 12 is interfaced to one or more appliance devices 24 (see Col. 4, lines 1 - 4 and 52 - 61); and (b) headend control station (HCS) 14 or controller. HCS 14, as shown in Fig. 1, includes: (a) headend transceiver unit (HTU) 18 having an RF transceiver (see Col. 4, lines 26 - 32); and (b) headend control computer (HCC) 16 having a 6 GB hard disk drive (a first memory), a 128 MB RAM (a second memory), and an Intel Pentium® P2 processor (see Col. 4, lines 15 - 25). As shown in Fig. 3 by del Castillo, AMS 12 comprises: (a) a universal relay unit (URU) 20 having an RF transceiver 22 (see Col. 4, lines 52 - 54); (b) an ID tag integrated circuit (IC) 35 or first memory for providing secure and non-volatile storage of a unique serial number (see Col. 5, lines 15 - 17); and (c) CPU 34. Per del Castillo, each URU 20 has a unique identification or serial number, and HCC 16 directs each wireless communication from HTU 18 with a destination address, which corresponds to the serial number of a particular URU 20, and relay addresses, which correspond to the serial numbers of other URUs 20 located in between, if necessary (see Col. 5, lines 1 - 12), thereby implying that HCC 16 has a routing table.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the first and second host units 100 of Nakazawa and Hamada as taught by del Castillo because a routing table enables a host unit 100 to determine the best way to route data to the desired destination appliance, thereby improving the efficiency of the system in the event host unit 100 is unable to communicate directly with the desired destination appliance due to distance or blockage.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clara Yang whose telephone number is (703) 305-4086. The examiner can normally be reached on 8:30 AM - 7:00 PM, Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on (703) 305-4704. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CY
1 April 2004

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